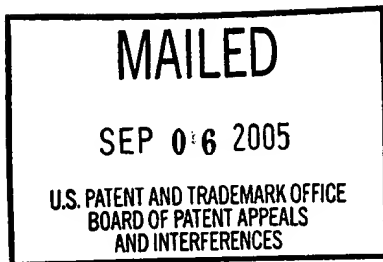


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte PAUL W. PAUSTIAN JR.
and
DAVID J. FORRESTER



Appeal No. 2005-1751
Application No. 09/973,005

ON BRIEF

Before McQUADE, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 5, 7 to 28 and 48 to 52. Claims 29 to 47 have been allowed. Claim 6, the only other claim pending in this application, has been objected to as depending from a non-allowed claim.

We AFFIRM.

BACKGROUND

The appellants' invention relates to the rapid deployment of troops and cargo. A copy of the dependent claims under appeal is set forth in the appendix to the appellants' brief. Claims 1 and 48, the independent claims on appeal, read as follows:

1. A rapid deployment system comprising an aircraft, at least one inflatable landing tube coupled to the aircraft, the at least one landing tube comprising an inner surface, an outer surface, a top end and an open bottom end, an inflatable exit slide positioned at the open bottom end of the landing tube, an air source connected to the landing tube and the exit slide for inflating the landing tube and the slide to an optimum pressure, and plural connectors positioned on the landing tube for coupling the landing tube to the aircraft, at least one entry port leading into the landing tube, and plural flexible retarders extending inward from the inner surface of the landing tube for retarding gravitational descent of cargo and personnel from the aircraft.

48. A method for rapid deployment from aircraft comprising installing a tube having internal flexible retarders and exit ramps on an aircraft, activating gas generators connected to the tube, inflating the tube, the internal flexible retarders and the exit ramps with gas delivered from the activated gas generators, entering the tube through an exit port in the aircraft communicating with an entry port in the tube, deploying down the tube, impacting the internal flexible retarders extending inward from an inner surface of the tube, exiting the tube, sliding down the exit ramp, and landing ready for combat from the tube.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Welsch et al. (Welsch)
Forrester

3,358,950
5,620,058

Dec. 19, 1967
Apr. 15, 1997

Claims 1 to 5, 7 to 28 and 48 to 52 stand rejected under 35 U.S.C. § 103 as being unpatentable over Welsch in view of Forrester.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the final rejection (mailed April 28, 2004) and the answer (mailed January 13, 2005) for the examiner's complete reasoning in support of the rejection, and to the brief (filed December 23, 2004) and reply brief (filed February 14, 2005) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A case of obviousness is established when the teachings of the prior art itself would appear to have suggested the claimed subject

matter to one of ordinary skill in the art. See In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). In considering the question of the obviousness of the claimed invention in view of the prior art relied upon, we are guided by the basic principle that the question under 35 U.S.C. § 103 is not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made. See Merck & Co., Inc. v. Biocraft Laboratories, Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, supra.

With this as background, we analyze the prior art applied by the examiner in the rejection of the claims on appeal.

Forrester

Forrester's invention relates to emergency evacuation systems for buildings, ships and other fixed and movable structures. Advantages of the emergency evacuation system include reduced cost relative to other evacuation methods, time and weather independence, minimal risk, high speed evacuation potential, and easy

installation without interfering with the primary use of existing structures. Forrester teaches (column 3, lines 54-63) that:

The present system is uniquely suitable for use with almost any fixed or movable structure including, but not limited to, buildings, ocean platforms, mine shafts and ships. Independent rescue and extraction models of the invention are available for use on structures not equipped with permanent systems before a catastrophe. Further, the system is adaptable to special operational insertions from aircraft in situations where, due to a lack of personnel training or due to a hostile environment, existing evacuation or insertion techniques are inadequate.

Figures 1-13 show a first embodiment of the emergency evacuation system which includes a combination of collapsed tubes inflatable by gas generators. When the system is inactive, the tubes remain flat and unnoticed. When activated, the gas generators deliver gas to the tubes, inflating the tubes rapidly. Once inflated, evacuees enter the tube 3 at predetermined entry ports and fall downward through the tube 3. As shown in Figures 2-4, friction assistors 5, bouncing bulges 7 and inflatable diverting slopes 11 line and extend inward from the inner surface of the tube 3, guiding and slowing bodies as the bodies descend the tube. Evacuees fall safely through the tube 3 and exit the bottom of the tube 3 to safety. An exit ramp 17, as shown in Figures 12-13, is positioned at the bottom of the tube 3 to cushion the fall of the evacuee.

The emergency evacuation system may be provided as an external attachment to structures. The collapsed tube 3 comes in prepackaged segments 13 or modules.

Each segment 13 of the collapsible tube 3 is connectable to other segments 13 to create a continuous tube 3 of modifiable length. The segments 13 forming the collapsible tube 3 are attached to a structure, such as a building, by climate and structure appropriate retention points 15. Possible retention points 15 include, but are not limited to, simple bolts, adhesives, pitons and drilled holes filled with solidifying compound. The segments 13 of the tube 3 remain deflated until gas generators are activated. When activated, the generators deliver gas to the segments 13, and the segments 13 expand outward from the structure, forming a continuous tube 3. Preferably, the pressure in the tube 3 is maintained at 30 psi to ensure the structural rigidity of the tube 3 and to prevent blow back from fire. Evacuees enter the tube through predetermined entry ports.

Figure 14 shows a second embodiment of the emergency evacuation system having a single entry port 21. As shown in Figure 14, the entry port 21 is located on the roof of a building, thus giving evacuees an uninterrupted descent through the tube 3 to the ground. Forrester teaches (column 7, lines 17-23) that:

[This] embodiment is inexpensive and is easy to install. Having a single entry port increases the reliability of the system and decreases the likelihood of jams in the system caused by the actions of evacuees or by partial failures of the system. Single entry port 21, however, clearly limits the number of people who can be evacuated. Single point entry also increases evacuation times.

Figures 52-55 show a third embodiment of the emergency evacuation system in which the system is connected to a ship. A collapsed tube 3 is connected to the side of a vessel 139. The internal details of the tube 3 are identical to those discussed above. The upper end 141 extends near the deck 143 of the vessel 139. The lower end 145 of the tube 3 is diverted six to twelve meters outward from the side of the vessel 139 to avoid undertow. Evacuees can exit directly into the water or into appropriately modified lifeboats.

Welsch

Welsch's invention relates to methods and apparatus which are particularly suited for discharging troops and equipment from a hovering aircraft, such as a helicopter, into a combat zone. Figure 1 schematically illustrates a helicopter 1 hovering above a predetermined location 2 which may comprise a point in a combat zone. The helicopter 1 contains troops and combat cargo. Vertically collapsible or retractable means 3 provide a shielded passageway extending downwardly from the aircraft 1. The lower end of the passage-defining means 3 preferably terminates beneath or close to the tops of adjacent vegetation so as to provide foliage screening adjacent the lower end 3a of the passage-defining means 3.

As shown in Figure 2, the passage-defining means 3 comprises collapsible or nestable wall means including a plurality of generally frusto-conical sections 4. The top section 4a, as shown in Figure 4, is provided with an annular flange 5 which rests on the lip or rim 6 of a floor opening 7 in the helicopter 1. Frusto-conical sections 4 may be fabricated of material which is resistant to small arms fire. Thus, the material employed in the fabrication of these sections may comprise bullet-resistant metal, plastic, fabric, or composite materials.

The aircraft 1 also carries an extensible support 17. As shown in Figure 2, this support 17 when extended, projects downwardly from, and is supported by, the top wall 12 of the aircraft 1. The support 17 is disposed coaxially with the frusto-conical sections 4 and terminates somewhat beneath the lower end 3a of the passage-defining means 3.

The operation of Welsch's apparatus will now be reviewed. The aircraft 1 transports troops and equipment to a site above the specified location 2. The aircraft 1 hovers above this location. The retracted passage-defining sections 4 and the tubular sections of the support 17 are projected downwardly to define a central, slide pole-like, support 17, and an encircling shield. Troops may thus slide down the support 17 toward the ground site 2. While sliding thus downwardly, the troops are shielded by the

lateral wall means provided by the extended sections 4. The lower end of the support 17 and the lower end of the passage-defining means 3 are at such an elevation as to enable the troops to leave the support 17 in relatively close proximity to the ground 2, preferably while being shielded by adjacent vegetation.

Claims 1 and 48

We sustain the rejection of claims 1 and 48 under 35 U.S.C. § 103.

In applying the above-noted test for obviousness, we reach the conclusion that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have coupled an emergency evacuation system as taught by Forrester to an aircraft as suggested by Forrester and/or Welsch. As stated above, Forrester specifically teaches that his emergency evacuation system "is adaptable to special operational insertions from aircraft in situations where, due to a lack of personnel training or due to a hostile environment, existing evacuation or insertion techniques are inadequate." In addition, Welsch clearly teaches discharging troops and equipment from a hovering aircraft, such as a helicopter, into a combat zone utilizing a depending passageway. From these teachings, it is our view that a person having ordinary skill in the art would have found it obvious at the time the invention was made to have coupled an emergency evacuation system such as that disclosed by either

Figures 1-13 of Forrester or Figure 14 of Forrester to an aircraft so as to enable personnel (e.g., troops) and/or cargo to be discharged safely and quickly to a hostile environment (e.g., combat zone).

In view of above determination of obviousness, we find the appellants' arguments concerning the lack of a proper motivation or suggestion to combine Welsch and Forrester to be unpersuasive. In addition, the appellants argument that specific limitations are not taught by the references is unpersuasive for the following reasons. First, Forrester's emergency evacuation system includes an inflatable exit ramp 17 positioned at the open bottom end of the inflatable landing tube 3 and an air source connected to the landing tube and the exit ramp for inflating the landing tube and the ramp. Second, Forrester's emergency evacuation system includes plural connectors positioned on the landing tube for coupling the landing tube the structure (i.e., aircraft), at least one entry port leading into the landing tube and plural flexible retarders extending inward from the inner surface of the landing tube for retarding gravitational descent of personnel from the structure. In short, the applied prior art, either singly (i.e., Forrester) or in combination (Forrester and Welsch), teaches and/or suggests all of the claimed features.

For the reasons set forth above, the decision of the examiner to reject claims 1 and 48 under 35 U.S.C. § 103 is affirmed.

Claims 2 to 5, 7 to 28 and 49 to 52

We sustain the rejection of dependent claims 2 to 5, 7 to 28 and 49 to 52 under 35 U.S.C. § 103.

In the brief (pp. 16-24 and 28-31), the appellants stated that the final rejection does not provide any basis for the rejection of each of the features in every dependent claim and therefore the appellants are unable to determine the examiner's basis for the rejection of each of the dependent claims adequately to rebut the rejection. Thus, the appellants concluded that the examiner has not established a case of obviousness.

In the answer (pp. 6-12 and 15-16), the examiner set forth the basis for the rejection of each of the features in every rejected dependent claim.

In the reply brief, the appellants did not rebut the examiner's basis for the rejection of each of the rejected dependent claims. Thus, the appellants have not cogently explained, and it is not apparent, why the examiner's basis for the rejection of

dependent claims 2 to 5, 7 to 28 and 49 to 52 as set forth in the answer is in error in any respect.

For the reasons set forth above, the decision of the examiner to reject dependent claims 2 to 5, 7 to 28 and 49 to 52 under 35 U.S.C. § 103 is affirmed.


CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 5, 7 to 28 and 48 to 52 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

AFFIRMED


JOHN P. McQUADE
Administrative Patent Judge


JEFFREY V. NASE
Administrative Patent Judge


JENNIFER D. BAHR
Administrative Patent Judge

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